

SUBSTANCE ABUSE INTERVENTION STUDY
AT THE
SPECIAL ALTERNATIVE INCARCERATION (SAI) PROGRAM

Conducted by

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SAI Substance Abuse Intervention Program Outcome Study

This paper describes the effectiveness of a substance abuse intervention program that was implemented at the Special Alternative Incarceration (SAI) Program in Chelsea, Michigan. Preliminary results indicate that trainees who completed the 90-day program that included the substance abuse intervention program showed significantly less recidivism than a group of trainees who completed the program before the substance abuse intervention was offered.

The preliminary evaluation indicates that 9% of the prisoner trainees going through the substance abuse cognitive program returned to prison with a technical violation, as compared to the control group which had 20% return. Similar findings occurred on other measures of recidivism, such as returning to prison for a new sentence or receiving a new charge.

Prisoners going through the SAI Program did similarly to probationers. When all charges and violations were combined, the experimental group receiving the cognitive substance abuse education had a 27.6% recidivism rate, compared to the control group rate of 37%. The differences are statistically significant.

Overview of Program:

In January of 2000, a substance abuse intervention program was implemented at the Special Alternative Incarceration (SAI) Program located at 18901 Waterloo Road, Chelsea, MI. The intervention is cognitive-behavioral with an emphasis on reducing/eliminating substance abuse relapse and criminal recidivism. The program runs in the evening and provides trainees with 20 group sessions of substance abuse intervention including a workbook. The ultimate goal of the program is to reduce recidivism.

Since January of 2000 through 12/31/01, more than 2400 trainees have completed the program. The successful completion rate is approximately 90%. Unsuccessful completions are the result of trainees leaving the program primarily due to medical problems, voluntary withdrawal, or rule violations.

The substance abuse intervention sessions are didactic/experiential in nature. Each session is comprised of several segments, including lecture, group participation, and written exercises. Individuals with bachelor and/or master degrees and sufficient background in conducting substance abuse treatment conduct the groups. The program is supervised by a master level social worker. A trainee workbook was written in November of 1999, revised in June of 2000 and in November of 2000. It is 76 pages long and contains a summary of each session as well as space to complete written assignments. The content of the cognitive sessions is listed at the end of this report.

The groups are one hour long and run five nights a week. The SAI Program holds four groups per evening for a total of 20 groups a week. Trainees are divided into groups of about 20 who attend 2 sessions per week. It takes a trainee approximately 10 weeks to complete the program. An average of 80 groups are conducted monthly.

Prior to discharge from the Phase I, trainees complete assessment paperwork. The counselor reviews the assessment data and the trainee's performance during the substance abuse intervention. Based upon this input, the counselor develops written recommendations that are forwarded with the trainee as he or she progresses through phases II and III of the SAI Program. The Michigan Department of Corrections

contracts with approximately 85 licensed substance abuse treatment programs state wide, for the provision of substance abuse treatment for persons under its jurisdiction. As a result, the trainee has many opportunities to engage in a continuum of treatment after discharge from the program.

Program Evaluation

The program contains three evaluation components: trainee satisfaction with intervention, pre to post intervention assessment, and a quasi-experimental design to assess the program's impact on recidivism. The three components showed positive results. Trainees assigned high ratings to the program. Pre to post scores on a content-based test showed that trainees were learning what was presented in the program. Finally, recidivism data showed that trainees that went through the substance abuse intervention appeared to have reduced recidivism compared with a group of trainees that did not have the substance abuse intervention. Each of these evaluation components is described below.

Trainee Satisfaction with Intervention

Trainees assign high ratings to the treatment program. At the end of the program trainees completed a program evaluation form indicating how satisfied they were with the program based on the following scale:

- 1 = Not at all
- 2 = Somewhat
- 3 = Uncertain
- 4 = Mostly
- 5 = Very much

On nearly all ratings, trainees scored "Mostly" to "Very" satisfied. Ratings, based on 1337 respondents, through December 2001 follow:

Average Rating	Question
4.42	How satisfied were you with the information presented in this program?
4.49	How clearly was the information presented?
4.58	How interesting and qualified were the presenters?
4.33	How easy was the workbook to understand?
4.26	How satisfied were you with the workbook?
4.47	Do you believe you benefited from this program?
4.30	Do you think the information was helpful to prevent you from having future problems with drugs and alcohol?
3.63	How motivated are you to attend treatment and/or AA/NA?
4.50	Do you think the program was helpful to prevent you from becoming involved in further criminal activities?
4.52	How satisfied are you with the program overall?

Additionally, trainees were asked whether they have formed a relapse/recidivism prevention plan, which is part of the program. Of 1337 respondents, 917 (69%) replied "yes," and 420 (31%) replied "no." Trainees were also asked whether they were willing to accept treatment recommendations. Of 1337 respondents, 1135 (85.1%) replied "yes," and 202 (15.1%) replied "no."

Pre to Post Test Results

Trainees completed several self-report measures prior to the program and upon completion of the program. The scores were aggregated and compared to assess pre to post intervention changes. Measures used from 1/2000 through 3/2001 were the Marlow-Crowne Social Desirability Scale, Social Problem Solving Inventory (long form), and a Beliefs Questionnaire. Measures used since 3/2001 through current day are the Marlow-Crowne Social Desirability Scale, Social Problem Solving Inventory (short form), and a Content Questionnaire that assessed trainees' retention of material presented during the intervention. Appendix A describes each of these tests.

Results indicate that trainees are retaining the information presented during the intervention. Results also indicate that trainees are endorsing more positive problem solving strategies as a result of the program. However, when the problem solving scores are conditioned to account for socially desirable response bias, they are no longer significant. Appendix B describes these statistics in more detail.

Intervention Impact on Recidivism

The impact of the intervention program on recidivism was studied using a quasi-experimental design comparing recidivism data of program completers (treatment group) with a group of trainees (control group) who went through the program before the substance abuse intervention program was offered. Preliminary results suggest that trainees who have had the substance abuse intervention have lower recidivism than trainees who went through the program before the intervention was implemented. These findings are summarized below.

The experimental group consisted of 577 trainees who began the program in the months of February through July of 2000 and graduated during the months of April through September of 2000. This group attended the substance abuse intervention as part of the program's regular programming.

The control group consisted of 207 trainees who graduated from the program in November and December of 1999, before the substance abuse intervention was introduced as part of the program.

Recidivism data was collected by the boot camp during the month of December 2001. Therefore the experimental group had been released from the program for approximately 15 to 21 months and the control group had been released from the program for approximately 25 to 26 months. Recidivism included (1) returning to prison because of a technical parole or probation violation, (2) returning to prison because of a new sentence while on parole or probation, and (3) being convicted of a new charge after completing parole or probation. Recidivism data is listed on next page.

Table 1: Recidivism Data

	Experimental Group		Control Group	
Prisoners	Number	Percent	Number	Percent
Return to prison with technical violation	23	9.4%	15	20%
Return to prison with new sentence	47	19.2%	12	16%
New charges after completing probation	0	0%	0	0%
<i>All prisoners recidivism</i>	70	28.5%	27	36%
<i>Total number of prisoners</i>	245		75	
Probationers				
Return to prison technical violation	67	20.2%	32	24.2%
Return to prison new sentence	10	3.0%	32	24.2%
New charges after completing probation	12	3.6%	08	6.1%
<i>All probationers recidivism</i>	89	26.8%	50	37.8%
<i>Total number of probationers</i>	332		132	
Combined Prisoners and Probationers				
Returned to prison with technical violation	90	15.6%	47	22.7%
Returned to prison with new sentence	57	10%	22	10.6%
New charges after completing parole/probation	12	2.1%	8	3.9%
<i>Total number of probationers and prisoners</i>	577		207	
Combined New Charges and Violations				
All new charges and violations	159	27.6%	77	37.2%

Using Chi-Square analysis the difference between the control group and the experimental group is statistically significant at the .009 levels.

The chart indicates that 9% of the trainees going through the substance abuse cognitive program returned to prison with a technical violation, as compared to the control group which had 20% return. Similar findings occurred on other measures, such as returning to prison for a new sentence or receiving a new charge.

Prisoners going through the SAI Program did not do better than probationers, 28% of prisoners in the cognitive treatment group recidivated compared to 27% of probationers. When all charges and violations were combined, the experimental group receiving the cognitive substance abuse education had a 27.6% recidivism rate, compared to the control group rate of 37%. These differences are statistically significant.

While this data is promising, it is important to keep in mind that the control group has had more post-release time to incur charges (15-21 months for the experimental group compared to 25-26 months for the control group). Current data collection methods did not allow a determination of what the impact of the differing release dates had on recidivism. Data collection for the next fiscal year will include an analysis to see how much of the difference in recidivism is due to release date, rather than program intervention. Finally, the control group is smaller than planned; this too will be expanded in the next data collection period.

Summary

In January of 2000, a substance abuse intervention program was added to the SAI Program in Chelsea, Michigan. The intervention is based on a cognitive-behavioral approach to substance abuse and criminal behavioral problems. Preliminary data indicate that the program may be having a positive impact on recidivism. This is consistent with other studies that show that treatment is superior to no treatment for substance abusing offenders (e.g., Lipsey, 1992; Redono, Sanchez-Meca, & Garrido, 1999).

Contents of workbook listed in SAI Program

- Session 01: Basic Information about Drugs and Alcohol
- Session 02: Basic Information about Dependence and Abuse
- Session 03: Drugs, Alcohol, and Criminal Behavior
- Session 04: Self and Other Awareness and Change
- Session 05: Value Clarification
- Session 06: Thinking and Change – Self-Defeating Core Beliefs
- Session 07: Thinking and Change – Thinking Errors
- Session 08: Thinking and Change – Identifying Problem Thinking
- Session 09: Thinking and Change – Changing Problem Thinking
- Session 10: Problem Solving – Attitudes and Cues
- Session 11: Problem Solving – Defining Problems and Goals
- Session 12: Problem Solving – Generating Solutions
- Session 13: Problem Solving – Deciding and Doing
- Session 14: Effects of Substance Abuse and Criminal Behaviors on Relationships
- Session 15: Relationships and Recovery – Thinking Differently
- Session 16: Relationships and Recovery – Acting Differently
- Session 17: Parenting
- Session 18: Healthy Practices and Safe Sex Practices
- Session 19: Interventions
- Session 20: Your Relapse and Recidivism Prevention Plan

Appendix A: Description of Pre/Post Tests

The Marlow-Crowne Social Desirability Scale (MCSDS) is a 33-item measure that assesses response bias - the degree individuals attempt to present themselves in a favorable light. Scores range from 0 to 33 with higher scores reflecting a greater degree of socially desirable responding. Items describe desirable but uncommon behaviors such as "Before voting I thoroughly investigate the qualifications of all the candidates," and undesirable but common behaviors such as "I like to gossip at times." Average scores for this test in college students range from 15.5 to 16.4 (Paulhus, 1991). The creators of the test report high test-retest and internal reliability ($\alpha = .88$) (Crowne & Marlowe, 1964). The Marlow-Crowne scores were used to condition other scores in an attempt to account for the possible effects of socially desirable responding.

The Beliefs Questions (BQ) is a 19-item measure used to assess endorsement of beliefs that may interfere with positive functioning. Trainees indicate how much they believe listed statements using a scale of 1 to 6 with 1 indicating "Strongly agree with the statement" to 6 indicating "Strongly disagree with the statement." Scores reflect how many statements the trainees agree with (either strongly or moderately). Examples of items follow: "Planning isn't worth it since you can't predict what will happen." "My feelings and mood are mainly created by things beyond my control." "The main problem that led me to be arrested is that I was in the wrong place at the wrong time." "Ordinary work is just too dull to be worth doing." Due to its poor performance in assessing change, the Beliefs Questionnaire was dropped in the first quarter of 2000.

The Social Problem Solving Inventory (SPSI) was used to assess personal problem solving skills. It is a 70 item multi-dimensional measure of problem solving that characterizes social problem solving as a complex, cognitive-affective-behavioral process that consists of a number of different components. There are a number of subscales for this test measuring cognitive, behavioral, and affective orientation to problem solving, ability to define problems, generate solutions, decide among them, and implement solutions. Higher scores indicate better problem solving skills. Mean scores for high stressed community residents were 81.96 (D'Zurilla & Nezu, 1992). Due to its length, the Social Problem Solving Inventory Long Form was replaced with the Short Form in March of 2001.

The Social Problem Solving Inventory (SPSI) short form has 25 items and has been shown to have high correlations with the long form SPSI (D'Zurilla, Nezu, & Maydeau-Olivares, 1996). The short form contains five subscales: positive problem orientation, negative problem orientation, rational problem solving, impulsivity style of problem solving, and avoidance style of problem solving.

The Content Questionnaire is a 42-item test that taps into the trainee's knowledge of material that was presented during the intervention. Questions are multiple choices as well as true and false.

Appendix B: Pre/Post Test Findings**Pre to Post Test Findings for the Period of 1/2000-3/2001**

Measure	Pre Treatment Mean & Standard Deviation	Post Treatment Mean & Standard Deviation	Significance Level	Significance Level with MCSDS
Social Problem Solving Inventory (n=472)	88.99 (27.51)	95.58 (27.36)	.000	.008
Beliefs Questionnaire (n=108)	4.06 (2.42)	3.14 (2.57)	.001	ns

Results from 472 completed pre to post tests indicated that the Marlow Crowne Social Desirability Scale was significantly correlated with scores on the Social Problem Solving Inventory. That is the higher trainees scored on the Marlow Crowne Social Desirability Scale, the higher their scores were on the Social Problem Solving Inventory. As a result the Marlow Crowne Social Desirability scores were used to condition the other scores in an attempt to reduce the effects of socially desirable responding.

Social Problem Solving Inventory pre score means were 88.99 (SD 27.51) and post score means were 95.58 (SD 27.36). Significant pre to post changes were found at the .000 level of significance. When the Marlow Crowne Social Desirability Scores were entered to condition the scores (control for social desirability responding), the level remained significant but dropped to .008. Subtests scores indicated significant and positive changes in trainees' abilities to define problems and goals, to generate alternative solutions to problems, to decide among the solutions, and to implement solutions.

Pre to Post Test Findings for the Period of 3/2001 – 12/01

Measure	Pre Treatment Mean & Standard Deviation	Post Treatment Mean & Standard Deviation	Significance Level	Significance Level with MCSDS
Social Problem Solving Inventory Short Form	66.1 (16.10)	68.8 (16.22)	.0001	.109
Content Test	21.51 (5.65)	24.96 (6.32)	.0001	n/a

Analysis of the short form Social Problem Solving Inventory (n=438) showed significant pre to post treatment score change at the .0001 significance level. Pre treatments mean scores were 66.1. Post treatments mean scores were 68.8. The change became statistically non-significant when the Marlowe Crown Scores were entered. There are a number of reasons for the lack of significance. First, while the problem-solving portion of the program is 4 sessions long, this may not be intensive enough. A second reason could be the measurement itself. We did find significance using the longer form of the Social Problem Solving Inventory. The authors of the test (D'Zurilla, Nezu, & Maydeu-Olivares, 1996) report strong reliability correlations between the short and the long form in a college sample. Further analysis is required to shed more light on the impact the using the short form in an incarcerated sample.

Analysis of the Content Test (n=438) showed significant pre to post treatment score change at the .0001 level. Mean pre-treatment scores were 21.51. Mean post scores were 24.96. These scores indicated that inmates learned and retained new material during the course of the intervention.